agricultural SITUATION

the crop reporters magazine

U.S. Department of Agriculture Statistical Reporting Service October 1972

WEATHER: ALL-IMPORTANT, UNPREDICTABLE FARM INPUT

WEATHER: THE ALL-IMPORTANT UNPREDICTABLE INPUT

A productive agriculture and a quality environment—how are we to organize our resources to achieve both in the years ahead?

This question, posed repeatedly nowadays, is one of the main concerns of agricultural meteorologists who seek to apply scientific knowledge from many disciplines to weather-related problems in agriculture.

Crop Diseases and Weather

Weather plays a key role in the development and spread of certain plant diseases. A very recent example involves the northward spread of southern corn leaf blight in 1970.

While weather scientists readily admit they don't yet know all the relationships between weather and blight, they have determined that the blight organism could not have developed without free water being present on the leaf for a period of 4 to 16 hours during spore germination.

Coupling this sort of information with what else they know about corn blight, computer models were developed which depict the life cycle of the southern corn leaf blight organism. The model was used last year to predict the rate at which blight infection might occur—and it turned out the predictions were pretty close to actual rates of blight development during 1971.

Agricultural meteorologists will be trying to develop more refined computer models for blight and other serious diseases in the years ahead. Potentially such models will provide an advanced warning system as to the direction and rate of movement of diseases, the need for preventive measures, and the need for controls on infestations already present.

Such information will not only save farmers the expenses of unnecessary chemicals and application labor, but will also prevent the unnecessary introduction of chemicals into the environment.

Insect Alerts

Just as weather conditions are critical in the development and spread of certain plant diseases such as corn blight, so too the climate plays a big part in insect infestations.

A case in point is the invasion of the screwworm fly in Texas this past summer.

Screwworm flies were an extremely serious problem in portions of the Southwest until the sterile fly control program virtually eradicated this insect from the United States 6 years ago. Since that time the usually hot dry summers along the Rio Grande have formed somewhat of a natural barrier that prevented any large scale invasion of this pest from Mexico.

That is, until this year.

Ideal weather conditions, from the screwworm fly's point of view, aided the flies in getting off to an early start in 1972 at a point further north than in other seasons. Then a wet cool summer in Texas allowed the flies to invade and increase to where they constituted a serious threat to the livestock industry in the Southwest, despite the efforts of a very effective U.S.-Mexico control program.

A major goal of agricultural meteorologists in the future is to determine the fine workings of various insects' biological systems—so that we can be better prepared against infestations.

Chemicals and Climate

Many of the chemicals that are used in agriculture are weather sensitive. Some readily break down in the presence of sunlight. All have varying degrees of stickability in the event of rain shortly after application.

The result of applications under adverse conditions is an economic loss to the farmer who will have to repeat the application. It also increases the potential of unnecessary pollution of soil and water.

A tremendous amount of work is being done to better understand the fate of agricultural chemicals and the role of weather. The results will not only save the farmer money but will

also help to provide for a cleaner environment.

Agricultural meteorology also improves the chances of getting sufficient disease and pest control with minimal residual contamination.

The amounts and methods of chemical application depend upon the weather. For example, the amount of fertilizer to apply should be determined in light of estimated soil moisture conditions, probable rainfall for the remainder of the season, and soil temperature as it influences the conversion of chemicals into mobile forms.

Nitrogen fertilizers, in their water-soluble nitrate form, move easily down through the soil. If the soil is too wet to absorb the nitrates, they will simply pass on into the groundwater or into adjoining streams and reservoirs.

New Tools for Meteorologists

The modern computer has proved a real boon to agricultural meteorologists, making it possible to simulate the growth of various types of plants under different cultural conditions.

While individual treatments still must be done largely in the laboratory or in the field, the compounded influence of many of these treatments can be determined effectively by the process of simulation on a computer.

Remote sensing is another important new tool for the scientists studying the interrelationships of weather and agriculture.

The ability to look down on large areas from aircraft or orbiting satellites provides for a more accurate assessment of the overall environment than is possible through analysis of individual point measurements.

There are a number of weather related agricultural and environmental problems which remote sensing may be used to solve in the future.

When the techniques are suitably developed, it may be possible to detect the movements of cattle herds on our extensive western ranges. By early detection of drought areas or the diagnosis of overgrazing problems in their early stages, the carrying capacity of our rangelands might be increased through improved practices.

The potential of remote sensing for monitoring soil moisture conditions has implications for many crops in the future. It will provide a meaningful estimate of irrigation water needs and increase the efficiency of water use.

It may be the key to estimating the winter snowpack in the mountains which provides water for summer irrigation. Sensing will also shed light on watershed conditions, water movement, and potential flood conditions.

THE BIG BIRTHDAY

Weather-crop reporting, a service of the Departments of Agriculture and Commerce, is 100 years old this year—and to commemorate the centennial the October *Agricultural Situation* includes a number of articles on the interrelationship of farming and weather.

The critical importance of weather as an agricultural input has been recognized since the earliest days of our country. The Pilgrims of Plymouth were keeping records of weather and its effect on crops as early as 1664. A century later scientific farmers like George Washington and Thomas Jefferson were trying to draw conclusions from weather observations which might help in agriculture.

The origins of today's weather-crop reporting service lie in a pilot project undertaken by the semipublic Smithsonian Institution around 1845. The Smithsonian supplied special observational equipment to a network of cross-country telegraph operators who relayed weather data back to Washington.

The Smithsonian project was given over to the U.S. Army's Signal Service in 1870—and 2 years later that group issued the first Weekly Weather Chronicle.

This bulletin has been published more or less continuously since that time—although it's undergone several name changes and had several different publishers in the intervening years as responsibility for civilian weather services was shifted from the Army to USDA, and finally to the Department of Commerce.

The Weekly Weather and Crop Bulletin, as the Chronicle is now called, is the outgrowth of weather information supplied by thousands of people in all parts of the Nation: county agents, numbering around 3,000, who are employed by USDA's Cooperative Extension Service . . . SRS crop reporters . . . State climatologists of the Commerce Department . . . and more than 13,000 weather observers, mostly volunteers, working with Commerce's National Oceanic and Atmospheric Administration (NOAA).

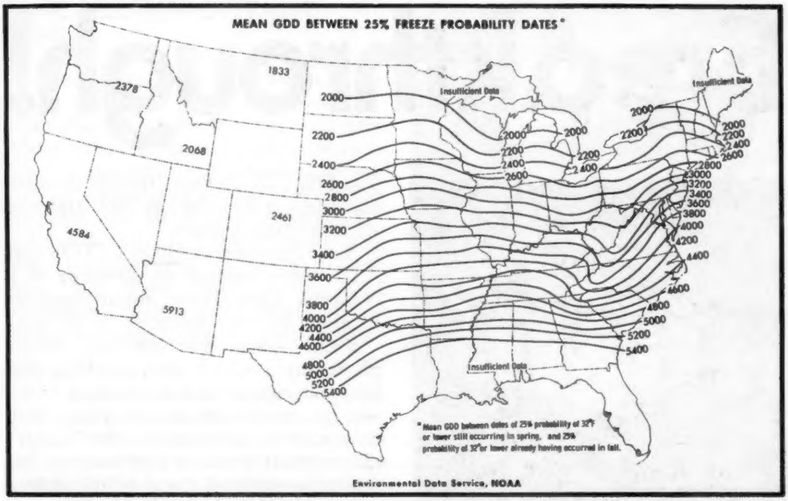
SRS State offices prepare weekly weather and crop reports based on data gathered by cooperators. These reports are released each Monday afternoon.

Advance copies of the State reports are wired to the National Meteorological Center in Maryland, and from there are relayed to a special Agricultural Climatology Office in USDA's South Building in Washington, D.C. At that point a national summary is compiled by a team of weather experts from NOAA and an SRS crop statistician. At noon each Tuesday, the national summary is released to the media.

The Weekly Weather and Crop Bulletin discusses weather-crop developments by both individual crops and on a State basis.

Besides temperature and rainfall, a typical State summary might give the percentage of the season's crop planted or harvested the preceding week, crop and pasture conditions, and drought or flood reports.

In addition, the Bulletin features maps of the Nation showing crop moisture, precipitation and temperature data and 30-day forecasts, and the total number of "growing degree days since March 1."



A MATTER OF DEGREE

Plants can't tell time. That's why, despite seed catalog descriptions that may say specific varieties will mature in a set number of days, actual crop maturity can come sooner or later than expected.

What plants can detect is temperature. For each species and variety of crop there is a minimum temperature below which growth isn't possible, an ideal temperature range at which growth is most favorable, and a maximum beyond which growth stops.

Knowing this, climatologists have worked out a method of forecasting crop maturity that replaces the growing time in calendar days with growing degree days (GDD's) which indicate the accumulated heat units required. This helps to make forecasting the harvest time of crops mostly a matter of simple arithmetic.

GDD's also can help in seed choice. A number of seed corn companies have begun to publish GDD ratings for their seed varieties and with this information a farmer can purchase the seed that most ideally fits the growing season in his area.

For example, say a farmer wanted to plant his corn in early May and have it mature before the first frost. A GDD map would tell him how many growing degree days he had during this time in his area—let's say 2,700 to 2,800.

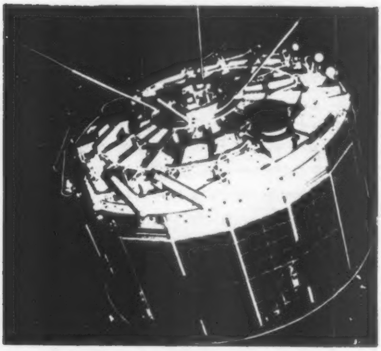
Thus, he'd probably select a hybrid with a maturity rating of 2,700 GDD or less—giving himself of a safety factor in case of an early frost.

Thirteen SRS State offices—Alaska, Idaho, Illinois, Indiana, Iowa, Missouri, New England, Ohio, Pennsylvania, South Dakota, Utah, West Virginia, and Wisconsin—are currently publishing GDD data for farmers in their areas.

Most of the 13 State SRS crop and weather releases tell how many GDD there have been since a certain date. Farmers can look at this and tell how far along their crops are or should be. They can also figure out how many GDD's are left—planning ahead for a double crop or extra hay cuttings.

Note: The map above indicates the number of GDD's likely to occur about half the time in a given area. That means that in roughly 5 years out of 10, a crop variety requiring the GDD's shown would mature without frost damage.

Breakthrough!



EYES ABOVE THE STORM

Hurricane CELIA, which raged across Cuba, Florida, and south Texas in early August 1970, left in its wake more than 30 dead, nearly 1,000 injured, and property damage in the millions. But the death and injury toll would have been far greater had not satellite photos pinpointed CELIA in its early stages and issued warnings far in advance of its arrival.

Such use of meterological satellites in forecating dangerous weather phenomena constitutes the most significant advance in weather reporting in this century. Global weather reporting had been expanding for 75 years but until the advent of weather satellites the weather information came from less than 20 percent of Earth.

Today's orbiting spacecraft enable man to observe the atmosphere continuously and to track severe storms. Weather satellites, their cameras and sensors scanning the darkness 900 miles above Earth, now provide weather pictures of the entire globe, day and night.

These valuable offshoots of the space program have advanced rapidly since they first came into being 12 years ago. The first TIROS experimental weather satellite was launched in 1960 and was an immediate success.

Since then new satellites—ITOS and ATS—have formed the keystone of a National Operational Environmental Satellite System, managed by NOAA.

From space the satellites return photographs which are something like what the eye would see, although without the resolution or the color. But they cannot photograph the longer-than-optical waves of heat energy, the pervasive store of force which drives the great engines of ocean and atmosphere. To get more than a photograph, scientists look to sensors which transmit the dynamic warms and colds, the absorptions and emissions, of Earth.

During the coming decade, more advanced satellites and computer networks are expected to provide reliable long-range weather predictions of 2 weeks or longer. Eventually the weather satellite could be one of several devices which will make possible weather modification or even control.

Meanwhile, the field of environmental satellites is sending off another branch, that of earth resources monitoring. NASA's Earth Resources Technology Satellites (ERTS), the first of which was launched this July, are gathering data which will help agricultural scientists manage plant, soil, and water resources. Accurate interpretation of this information could help identify crops; assist in estimating crop yields; detect insect disease and weed infestations; reveal soil nutrient and moisture conditions; and monitor pollution patterns.

The ERTS program is so new that its potential is only beginning to be realized. Together with weather satellite technology, these children of the space age could usher in a whole new era for the U.S. farmer.

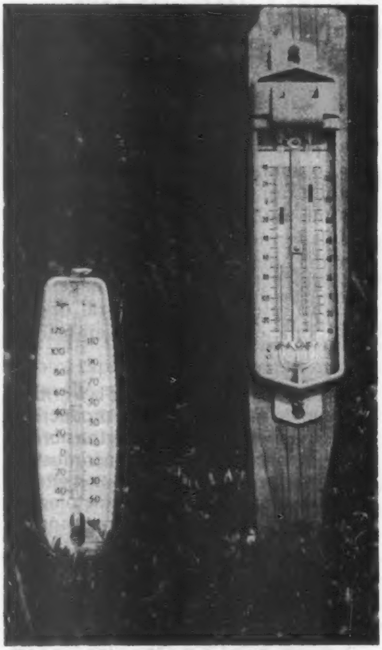
THE ALL-IMPORTANT INPUT

Modern agriculture is an increasingly complex, large-scale, scientific operation. The average U.S. farmer today produces enough to feed 50 people. To maintain and increase production of a rapidly expanding population at home and abroad, the modern successful farmer is turning more and more to climatology for help in making long and short range management decisions affecting agricultural operations. Some examples are given below:

PRECIPITATION: Water is a critical item in most agricultural production. Even where irrigation is the normal practice, the farm planner must be concerned with precipitation as it affects his source of supply. Climatology is concerned not only with average annual and monthly amounts but also with frequency, duration, and intensity of precipitation. In many farm areas the rainfall conditions are marginal for certain crops but adequate for others. Climatology helps in determining the best use to be made of the soil and the risks being taken by producers.

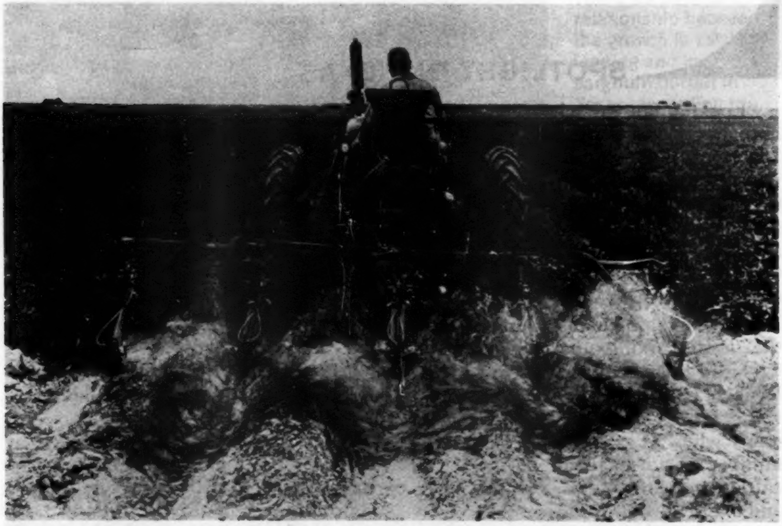
HAIL FREQUENCY: Hail is one of the most destructive forms of precipitation. The most frequent hail injury consists of shredding plant leaves, causing loss of part of the leaf tissue. In severe cases the entire leaf blade is often stripped from the midrib and the stalks themselves may be bruised, broken, or even beaten into the ground. But since hail storms are of an extremely local nature, climatological information on their frequency can be helpful to growers in planning type of crop, and planting and harvesting dates.

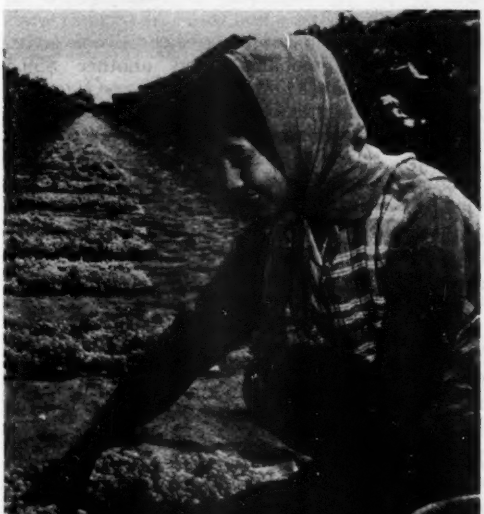
TEMPERATURE DATA: Each variety of plants grows best within certain temperature limits and climatological records indicate regions best suited for each crop. Growth ceases and the plant becomes susceptible to injury below certain minimum and above certain maximum temperatures. For example, corn is grown largely in regions where the summer temperature averages between 70 and 80° F., while a mean temperature of 80 to 90° seems most favorable for cotton. The climatologist presents temperature data in many useful forms for planning purposes. Certain threshold temperatures such as 32, 42, and 50° F. are widely used in planning times of planting while growing degree days are used to predict dates of crop maturity. Freeze probabilities are especially important in areas where winter and spring fruit and vegetable production is a major activity. A familiar sight in such areas during the frost season are thermometers that tell growers when the temperature is approaching the danger point and record daily high and low readings.



WEATHER WARNINGS FOR FRUIT AND VEGETABLE GROWERS: Climatological data on the probability of a frost is all-important in areas of winter and spring fruit and vegetable production. Many protective measures can be taken against frost damage but all are expensive and many require considerable preparation. NOAA's Frost Warning Service issues forecast bulletins at regular intervals each day during periods when low temperatures threaten damage to crops. These bulletins help farmers set in motion a wide range of frost protection devices. Here an insulating foam is being used to protect young truck crop plants. Climatologists in the Frost Warning Service also give special attention to forecasts of rain, wind, and other weather conditions affecting spraying and dusting, harvesting, and so forth.

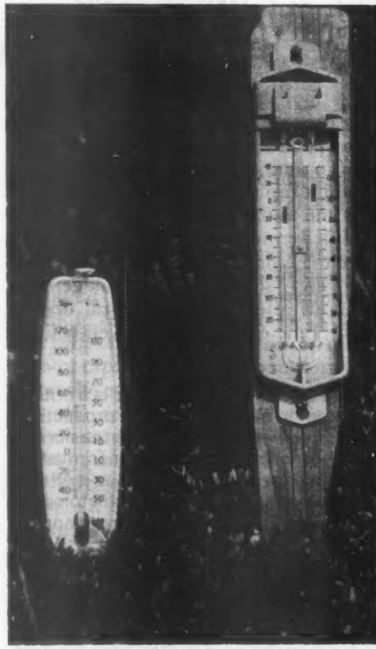
CLIMATE AND SOIL TRAFFICABILITY: Many crops require frequent applications of chemicals to prevent or control diseases and insects. These chemicals may be applied by aircraft or by tractor-mounted equipment. Climatology helps to determine which type of equipment farmers should invest in through soil trafficability studies. If the season when spraying and dusting are required has frequent heavy rains, the soil can be compacted and its productivity reduced by running heavy tractors over it. In such cases farmers may need to rely on the aerial application. The relationship of climate to soil trafficability is also used in planning for planting, cultivating, harvesting—as well as in selecting crop varieties.





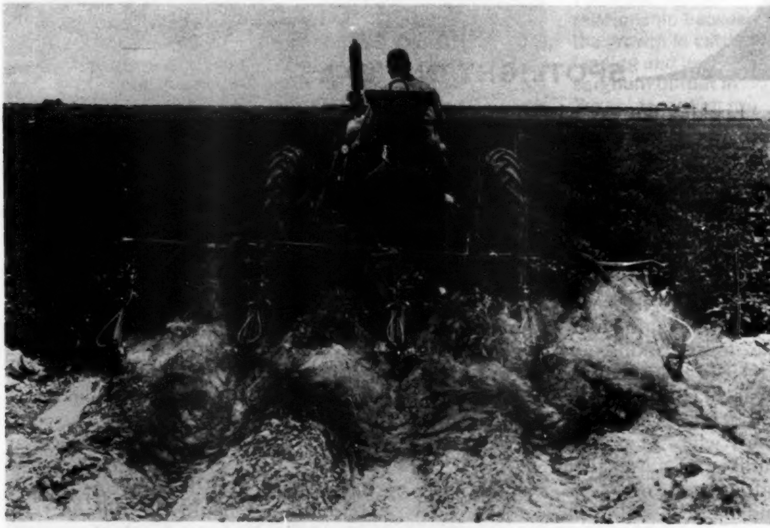
DRYING—WEATHER PROBABILITIES: Hay drying, tobacco curing, and fruit drying all depend on the knowledge of probabilities of dry weather of sufficient duration to cure the crop. We all eat California raisins but few of us realize what an important part weather plays in converting grapes into raisins. Three or 4 weeks exposure to dry air and sunshine are needed to complete the "curing" of small seedless raisins, while large-seeded varieties require up to 6 weeks drying time. Climatological statistics are used to estimate the probabilities of such dry periods.

TEMPERATURE DATA: Each variety of plants grows best within certain temperature limits and climatological records indicate regions best suited for each crop. Growth ceases and the plant becomes susceptible to injury below certain minimum and above certain maximum temperatures. For example, corn is grown largely in regions where the summer temperature averages between 70 and 80° F., while a mean temperature of 80 to 90° seems most favorable for cotton. The climatologist presents temperature data in many useful forms for planning purposes. Certain threshold temperatures such as 32, 42, and 50° F. are widely used in planning times of planting while growing degree days are used to predict dates of crop maturity. Freeze probabilities are especially important in areas where winter and spring fruit and vegetable production is a major activity. A familiar sight in such areas during the frost season are thermometers that tell growers when the temperature is approaching the danger point and record daily high and low readings.



WEATHER WARNINGS FOR FRUIT AND VEGETABLE GROWERS: Climatological data on the probability of a frost is all-important in areas of winter and spring fruit and vegetable production. Many protective measures can be taken against frost damage but all are expensive and many require considerable preparation. NOAA's Frost Warning Service issues forecast bulletins at regular intervals each day during periods when low temperatures threaten damage to crops. These bulletins help farmers set in motion a wide range of frost protection devices. Here an insulating foam is being used to protect young truck crop plants. Climatologists in the Frost Warning Service also give special attention to forecasts of rain, wind, and other weather conditions affecting spraying and dusting, harvesting, and so forth.

CLIMATE AND SOIL TRAFFICABILITY: Many crops require frequent applications of chemicals to prevent or control diseases and insects. These chemicals may be applied by aircraft or by tractor-mounted equipment. Climatology helps to determine which type of equipment farmers should invest in through soil trafficability studies. If the season when spraying and dusting are required has frequent heavy rains, the soil can be compacted and its productivity reduced by running heavy tractors over it. In such cases farmers may need to rely on the aerial application. The relationship of climate to soil trafficability is also used in planning for planting, cultivating, harvesting—as well as in selecting crop varieties.



DRYING—WEATHER PROBABILITIES: Hay drying, tobacco curing, and fruit drying all depend on the knowledge of probabilities of dry weather of sufficient duration to cure the crop. We all eat California raisins but few of us realize what an important part weather plays in converting grapes into raisins. Three or 4 weeks exposure to dry air and sunshine are needed to complete the "curing" of small seedless raisins, while large-seeded varieties require up to 6 weeks drying time. Climatological statistics are used to estimate the probabilities of such dry periods.

SPOTLIGHT ON TEXAS

"Looking out my window I can see both the Texas State Capitol and the University of Texas football stadium—which gives me a chance to point out to visitors that Texas has long been a top producer in politics and sports as well as in agriculture," chuckles Charles Caudill, statistician in charge of SRS in Austin.

Wheeling his chair around to face the desk, Caudill quickly gets serious when he talks about the record of the Lone Star State's agriculture. He can rattle off a long list of agricultural items where Texas ranks No. 1: the number of farms, land in farms, all cattle, beef cows, goats, mohair, sheep and lambs, wool, grain sorghum, cotton, guar, and rice, as well as cabbage and watermelon acreage harvested.

"In fact," Caudill continues, "Texas ranks within the top 15 States in production of almost all major and most minor agricultural commodities produced in the United States."

Livestock are the big agricultural earners in the Lone Star State, contributing $2.1 billion of the $3.3 billion in farm cash receipts during 1971. Texas ranked second among the States in cash receipts from livestock sales last year, while in 1960 the State ranked only fifth.

Headlining the increase in livestock production has been the tremendous increase in cattle feeding operations, according to Caudill. During the past decade Texas has moved from ninth to first place among the important cattle feeding States.

"Cattle on feed in Texas January 1, 1972, at 1.8 million head, was six times the number on feed 10 years earlier," Caudill remarks. "Texas accounted for 14 percent of the cattle on feed in the 23 most important cattle States, compared with only 4 percent January 1, 1962. And since June 1972 Texas has been the leading State with the number of cattle on feed surpassing Iowa, the traditional leader."

Although cattle is the largest source of agricultural income, Caudill is quick to point out that Texas farmers and ranchers "are not novices when it comes to producing milk, hogs, sheep and wool, goats, and mohair, as well as poultry and poultry products."

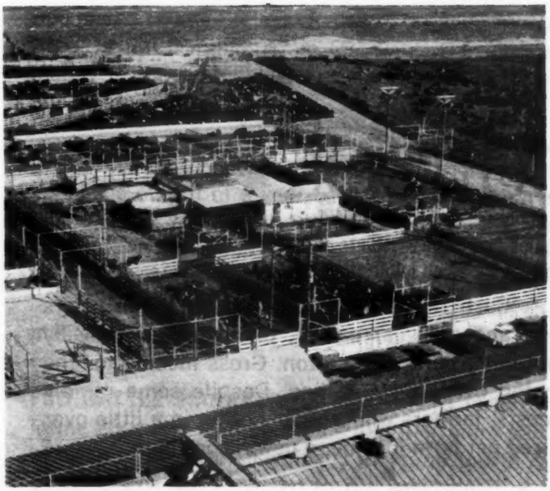
In 1971 Texas ranked No. 14 in hog production with cash receipts totaling $86.8 million. Sheep, wool, goats, and mohair added another $59.3 million.

"And when it comes to poultry, Texas ranks fifth in turkey production, seventh in broiler production, and tenth in egg production." Caudill adds. "Income from these sources totaled $202.5 million in 1971."

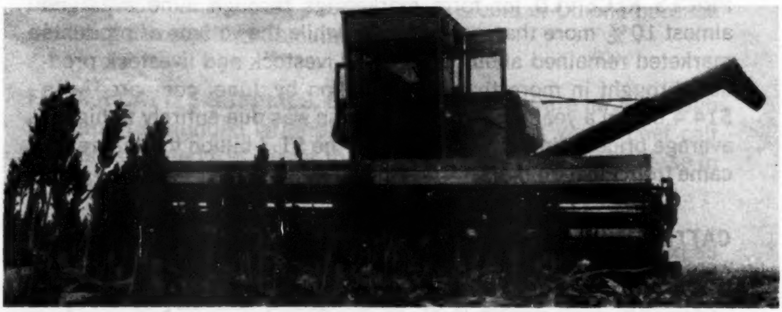
Last year Texas was the ninth largest dairy State with milk sales totaling $222 million.

Changing the subject to crops, Caudill notes that the production of grain sorghum in Texas has pretty much paralleled the increase in cattle feeding.

Texas' grain sorghum production has increased by more than 50 percent during the past decade, he tells us. The value of last year's crop totaled $339.4



There's a definite relationship between the growth in cattle feeding and in grain sorghum output in Texas, according to Charles Caudill, the SRS State Stat. Witness a sixfold increase in cattle on feed and a 50+ percent gain in sorghum production in the past decade.



million. Over 300 million bushels were harvested from 5.8 million acres, making grain sorghum the largest crop in terms of acreage in the State.

"While cotton is no longer 'King' here in terms of acreage, we're still the Nation's largest cotton producer," Caudill says. "If you include the value of American-Pima and cottonseed, the value of our 1971 cotton crop added up to $406.4 million. Texas' 2.6 million bales of upland cotton accounted for one-fourth of the U.S. crop last year."

To record the progress of agriculture, Texas has established one of the most comprehensive, modern agricultural data systems based on probability sampling techniques in the Nation, according to Caudill.

The system is operated as an adjunct of the Federal crop and livestock estimating program, which is designed and funded to provide only State and national estimates.

The Texas SRS office provides annual probability estimates of some 65 crop and livestock items for each of the 254 State counties. The program, first started in 1968, is funded by the Texas legislature.

"While the program has the unanimous support of the agricultural leadership in the State," Caudill states, "its success has been largely due to the Texas farmers and ranchers who voluntarily answer the questions necessary for collecting the primary data required to produce the statistics for each county within the State."

ag outlook

Digested from outlook reports of the Economic Research Service.
Forecasts based on information available through September 1, 1972

A GOOD YEAR . . . Cash receipts to farmers during the year's first half stood 8% above a year earlier, highlighted mainly by higher returns from beef, pork, and cotton. Gross income for the year now is estimated over $64½ billion. Despite some rapidly rising production costs, farmers will probably bring in a little over $18 billion in realized net farm income, a new record high.

•

PRICES RECEIVED for farm marketings through June averaged almost 10% more than a year earlier while the volume of products marketed remained about the same. Livestock and livestock products brought in more than $16.1 billion by June, compared with $14.4 billion a year earlier. The increase was due entirely to higher average prices. Almost $1.6 billion of the $1.7 billion total increase came from meat animals.

•

CATTLE AND HOGS . . . UP . . . Receipts for cattle and calves were up nearly $1 billion for the first half, compared with 1971. Hog producers' receipts were up about $600 million as reduced supplies and continuing strong demand boosted prices 40% above year-earlier levels.

•

THE COST OF ALMOST EVERYTHING that it takes to run a farm averaged almost 6% more this July than a year earlier. Expenses for production items, interest, taxes, and wages drifted upward. Only purchased feed of the major items cost less than a year earlier. Noticeable gainers during the past months have been farm machinery and building and fencing materials. At midyear they were up 6% and 8%, respectively, from a year earlier. For all of 1972, farm expenses are likely to gain around $2½ billion, or possibly more, over the $44 billion paid out during 1971.

•

COTTON INCOME . . . Cotton plantings are estimated 12% more than last year. Cotton prices so far this year have been running

well ahead of 1971 levels. Receipts for January–June to producers were up $200 million from last year. Good prices are stemming mainly from small carryovers resulting from a short crop in 1971 and relatively firm demand.

•

RED MEAT . . . Second half 1972 red meat production will about equal the output of a year earlier due mainly to a large beef pull-ahead. Pork production will be off from last year—veal, lamb, and mutton will continue their downtrends, which date back several years. Although expanding beef production and the seasonally larger pork supplies will bridle prices later in the year, prices of most classes of livestock will still run ahead of last year's.

•

FED CATTLE MARKETINGS look record large this year. Feeders in the 23 major feeding States had 9% more cattle on feed July 1 in weight groups that typically make up fourth quarter sales. Fed cattle prices are expected to run well ahead of last July–December's $33.50 per hundred pounds Choice steers at Omaha because of strong demand and a smaller pork output.

•

FEEDER CATTLE SUPPLIES, up again at midyear, are large enough to support continued large placements. Also, this year's beef calf crop is estimated 4% larger than 1971's, indicating an increase in the 1973 feeder cattle supply.

•

HOGS . . . The hog situation during the second half will remain as tight as in 1972's first 6 months, when slaughter dipped 9% under the previous year and prices soared 40% above. Also, operators had 7% fewer market hogs on June 1 and plan 5% less farrowings than a year earlier during June–November. So, although farrowings may rise above year earlier levels next winter, hog slaughter will trail behind year earlier levels through mid–1973 and prices will continue strong.

•

MAIN COURSES . . . During 1972's second half red meat consumption will continue to trail year earlier levels. During the first half it fell off about 1 pound per person from the 95-pound year earlier level.

•

BEEF . . . Second half beef consumption will probably average around 59 pounds per person, up 2 pounds from a year earlier. Pork consumption will probably fall off around 3 pounds from 1971's second half, settling at around 34 pounds per person. Veal, lamb, and mutton will continue their fallback this year.

FUTURES MARKET . . . Futures trading in regulated agricultural commodities hit an alltime high during the year ended June 30. Trading in 17 commodities increased 6% over the year earlier, totaling 12.6 million transactions. The total was valued at an estimated $148.0 billion, compared to 1970/71's 114.4 billion.

•

FUTURES CHAMPS . . . Soybeans hit an alltime record in futures trading, marking up almost 4 million transactions. The volume transacted—19.8 billion bushels—was up 47% from the 13.4 billion traded the year before. Frozen pork bellies ranked as second most active with over 2 million transactions, up 34% from the year earlier. Live hogs set a new record for themselves, 366,450 transactions, up 92% from the year earlier. Pig value totaled almost $2.8 billion, compared with 1970/71's almost 1.1 billion.

STATISTICAL BAROMETER

Item	1970	1971	1972—latest available data	
Farm output, total (1967=100)	102	111	110	August
Crops (1967=100)	100	112	110	August
Livestock (1967=100)	105	108	109	August
Prices received by farmers (1967=100)	110	113	128	August
Prices paid, interest, taxes, wage rates (1967=100)	114	120	127	August
Ratio [1] (1967=100)	96	94	101	August
Consumer price index:				
All items (1967=100)	116	121	126	July
Food (1967=100)	115	118	124	July
Disposable personal income ($ bil.)	689.5	744.4	782.9	[3]
Expenditures for food ($ bil.)	114.2	117.3	123.3	[3]
Share of income spent for food (percent)	16.6	15.8	15.7	[3]
Farm food market basket:[2]				
Retail cost ($)	1,223	1,244	1,299	June
Farm value ($)	476	477	528	June
Farmer's share of retail cost (percent)	39	38	41	June
Agricultural exports ($ bil.)	7.2	7.7	0.7	July
Agricultural imports ($ bil.)	5.7	5.8	0.5	July
Realized gross farm income ($ bil.)	57.9	60.1	64.8	[3]
Production expenses ($ bil.)	41.1	44.0	46.5	[3]
Realized net farm income ($ bil.)	16.8	16.1	18.3	[3]

[1] Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates.
[2] Average quantities per family and single person households bought by wage and clerical workers, 1960–61, based on Bureau of Labor Statistics figures.
[3] Annual rate, seasonally adjusted, second quarter.

FINANCES FOR FUN

While the demand for outdoor fun keeps growing, most large tracts of public lands lie far removed from people who like to hunt, fish, or hike.

However, many farms are close enough to large cities to provide recreational opportunities. Could these be made more widely available to the public?

To test the practicality of free public access to private farmlands for recreational uses, USDA's Agricultural Stabilization and Conservation Service is operating a pilot program in five counties in each of 10 States. The program offers farmers payments for allowing free public access to their farms for hunting, fishing, trapping and hiking.

To be eligible, farmers must be participating in an ASCS wheat, feed grain, or cotton set-aside program.

The ASC State committee, in consultation with State wildlife agencies, will establish quality criteria for hunting and fishing and payment rates will be set accordingly.

Payments for hunting may be as much as $3 per acre, depending on game population and game cover. Payments for fishing may be as much as $150 per pond or lake, depending on how good the fishing is.

Hiking and trapping rates will be set on an individual farm basis.

Farmers can set some limits on use of their land. For example, they can limit the number of users at any one time and they can specify the type of vehicles if any allowed on their land. A farmer may deny access to an individual who may endanger people or property. A farmer may also deny access if dangerous circumstances arise.

The county ASC committees will administer the program for five counties in Colorado, Indiana, Iowa, Louisiana, Michigan, North Dakota, Oklahoma, Oregon, Pennylvania, and South Carolina.

The program has been funded up to $1.5 million for 1972, which should provide agreements for almost 5,000 farmers.

Farmers who get into the recreation program will, besides allowing others to use their land free of charge, have to do three things:

—Provide a card for users to furnish information to help the program.

—Make a written report about the use of his land by the public.

—Post signs stating that the public has access to the land.

AGRICULTURAL SITUATION

OCTOBER 1972 Vol. 56, No. 9

Distributed free to crop and livestock reporters in connection with their work.

All articles may be reprinted without permission.

Editor: Geraldine Schumacher

The Agricultural Situation is a monthly publication of the Statistical Reporting Service, United States Department of Agriculture, Washington, D.C. 20250. The printing of this publication has been approved by the Bureau of the Budget (January 2, 1969). Single copy 10 cents, subscription price $1 a year, foreign $1.50, payable in check or money order to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

U. S. GOVERNMENT PRINTING OFFICE : 1972 O - 474-714

UNITED STATES
DEPARTMENT OF AGRICULTURE
STATISTICAL REPORTING SERVICE
WASHINGTON, D.C. 20250

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE & FEES PAID
United States Department of Agriculture

U.S.MAIL

UNITED STATES